

Abstract

Method and Device for Melting Down Metal-containing Material

In a method and a device for melting down metal-containing material, preferably fine-particulate metal-containing material, such as sponge iron, in a metallurgical melting furnace (1), wherein, in an interior space (11) of the melting furnace (1), a metal melt (5) and a slag layer (6) floating on top of the metal melt (5) are maintained, the metal-containing material is added by means of a supply means dipping into the slag layer (6) and energy is added in the form of electric arcs (14), the metal-containing material is charged directly into the central region (Z) of the melting furnace (1) by means of at least one charging tube (8) exclusively serving for conveying material via the charging tube outlet (9) of the same, the electric arcs (14) are directed obliquely towards the metal melt (5) against the central region (Z) of the melting furnace (1) and the metal-containing material is melted in the slag layer (6) and a mixed process slag-metal melt is maintained in the region of the charging tube outlet (9). (Fig. 1)

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